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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10-048,221	01/29/2002	Takashi Fujii	OGW-0214	3011

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EXAMINER

DEL SOLE, JOSEPH S

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 05/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/048,221

Applicant(s)

FUJII ET AL.

Examiner

Joseph S. Del Sole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 29 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: ____

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DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 8/29/02 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP 609. It has been placed in the application file and the information referred to therein has been considered as to its merits.

Drawings

2. Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (page 4 of the specification indicates that this figure is prior art. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, at lines 7-9 states: "the annular diameter of said nozzles being from no less than 0.6 times to one time of the internal diameter of the cylindrical filter", however this is unclear. If a nozzle was 0.6 times the internal diameter of the cylindrical filter there would not be room for a second nozzle. Based on the drawings and the specification this limitation will be interpreted by the examiner as --the annular diameter

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of said at least one circle of said nozzles being from no less than 0.6 times to one time of the internal diameter of said cylindrical filter-- for purposes of examination. The claim must also be corrected.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagiwara et al (JP 55-93816).

Hagiwara teaches a melt spinning apparatus (Fig 1) having a spinning unit disposing a spinning plate (Fig 1, 1) having a plurality of nozzles (Fig 2) and a cooling device disposed below the spinning nozzle (Fig 1, #2 and #3); wherein the nozzles of the spinning plate are arranged annular in at least one circle (Fig 2), and a cylindrical filter (Fig 1) is disposed at an exit of a cooling wind in the cooling device so as to enclose around a spun yarn discharged from the spinning plate, the annular diameter of the nozzles being from no less than 0.6 times to one time of the internal diameter of said cylindrical filter (Fig 2); wherein the center distance between the adjoining nozzles in the plurality of nozzles is no less than 8 times of the diameter of the nozzles.

Regarding: "the flow velocity of the cooling wind blown from said cylindrical filter being distributed gradually higher according to the downstream of the spun yarn", this

limitation is a process limitation and therefore carries no weight in these apparatus claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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10. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al (JP 55-93816) in view of Babcock (2,252,684).

Hagiwara et al teach the apparatus as discussed above including a cylindrical flow guide (Fig 1) disposed to enclose an outer circumference of the cylindrical filter.

Hagiwara et al fail to teach the cylindrical flow guide having an inner wall made inclined close to an upper side of the cylindrical filter; a plurality of rectifying vanes arranged on an inner wall of the cylindrical flow guide to extend radially toward the center of the cylindrical filter and at intervals in the circumferential direction on the inner wall; and a guide tube connected to the lower end of the cylindrical filter.

Babcock teaches a guide tube connected to the lower end of the cylindrical filter (Fig 5, #25) for the purpose of guiding air further downward along the fibers; a cylindrical flow guide (Fig 5, #62) enclosing a cylindrical filter (Fig 5, #65) wherein the inner wall of the cylindrical flow guide is inclined close to an upper side of the cylindrical filter and a plurality of rectifying vanes arranged on an inner wall of the cylindrical flow guide to extend radially toward the center of the cylindrical filter and at intervals in the circumferential direction on the inner wall (Fig 5, #63) for the purpose of decreasing the volume through which cooling wind flows before flowing through the filter and straightening the air flow (page 2, col 2, lines 11-27).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Hagiwara et al with a guide tube connected to the lower end of the cylindrical filter, a cylindrical flow guide enclosing a cylindrical filter wherein the inner wall of the cylindrical flow guide is inclined close to

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an upper side of the cylindrical filter and rectifying vanes arranged on an inner wall of the cylindrical flow guide as taught by Babcock because it straightens and guides air through the filter and over filaments.

11. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al (JP 55-93816) in view of Hiroki et al (JP 62-085009).

Hagiwara et al teach the apparatus as discussed above including a cylindrical flow guide (Fig 1) disposed to enclose an outer circumference of the cylindrical filter.

Hagiwara et al fail to teach the cylindrical flow guide having an inner wall made inclined close to an upper side of the cylindrical filter; and a plurality of rectifying vanes arranged on an inner wall of the cylindrical flow guide to extend radially toward the center of the cylindrical filter and at intervals in the circumferential direction on the inner wall.

Hiroki et al teach a cylindrical flow guide (Fig 1, #8) enclosing a cylindrical filter (Fig 1, #7) wherein the inner wall of the cylindrical flow guide is inclined close to an upper side of the cylindrical filter and a plurality of rectifying vanes (Fig 1, #12) arranged on an inner wall of the cylindrical flow guide to extend radially toward the center of the cylindrical filter and at intervals in the circumferential direction on the inner wall for the purpose of regulating the flow of blowing gas about an extruded filament.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Hagiwara et al with a cylindrical flow guide enclosing a cylindrical filter wherein the inner wall of the cylindrical flow guide is inclined close to an upper side of the cylindrical filter and rectifying vanes

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arranged on an inner wall of the cylindrical flow guide as taught by Hiroki et al because it helps regulate the flow of blowing gas about an extruded filament.

12. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al (JP 55-93816) in view of Lenk (4,681,522).

Hagiwara et al teach the apparatus as discussed above including a cylindrical flow guide (Fig 1) disposed to enclose an outer circumference of the cylindrical filter.

Hagiwara et al fail to teach the cylindrical flow guide having an inner wall made inclined close to an upper side of the cylindrical filter and a guide tube connected to the lower end of the cylindrical filter.

Lenk teaches a guide tube connected to the lower end of the cylindrical filter (Fig 1, #7) and a cylindrical flow guide (Fig 1, #4) enclosing a cylindrical filter (Fig 2, #3) wherein the inner wall of the cylindrical flow guide is inclined close to an upper side of the cylindrical filter for the purpose of cooling filaments.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Hagiwara et al with a guide tube connected to the lower end of the cylindrical filter and a cylindrical flow guide enclosing a cylindrical filter wherein the inner wall of the cylindrical flow guide is inclined close to an upper side of the cylindrical filter as taught by Lenk because it enables cooling of filaments by straightening and guiding air through a filter.

13. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al (JP 55-93816) in view of Japanese Patent 8-218217.

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Hagiwara et al teach the apparatus as discussed above including a cylindrical flow guide (Fig 1) disposed to enclose an outer circumference of the cylindrical filter.

Hagiwara et al fail to teach the cylindrical flow guide having an inner wall made inclined close to an upper side of the cylindrical filter and a guide tube connected to the lower end of the cylindrical filter.

Japanese Patent 8-218217 teaches a guide tube connected to the lower end of the cylindrical filter (Fig 1) and a cylindrical flow guide (Fig 1) enclosing a cylindrical filter (Fig 1) wherein the inner wall of the cylindrical flow guide is inclined close to an upper side of the cylindrical filter for the purpose of decreasing the volume through which cooling wind flows before flowing through the filter and straightening the air flow.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Hagiwara et al with a guide tube connected to the lower end of the cylindrical filter and a cylindrical flow guide enclosing a cylindrical filter wherein the inner wall of the cylindrical flow guide is inclined close to an upper side of the cylindrical filter as taught by Japanese Patent 8-218217 because it straightens and guides air through a filter and over filaments.

14. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al (JP 55-93816) in view of either Lenk (4,681,522) or Japanese Patent 8-218217 and further in view of Broaddus et al (4,712,988).

Hagiwara et al and either Lenk or Japanese Patent 8-218217 teach the apparatus as discussed above.

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Hagiwara et al fail to teach a plurality of rectifying vanes arranged on an inner wall of the cylindrical flow guide to extend radially toward the center of the cylindrical filter and at intervals in the circumferential direction on the inner wall.

Broaddus et al teach a plurality of rectifying vanes (Fig 1, #26) arranged on an inner wall of a cylindrical flow guide (Fig 1, #14) to extend radially toward the center of the cylindrical filter (Fig 1, #23) and at intervals in the circumferential direction of the inner wall (Fig 1) for the purpose of uniformly distributing cooling gas prior to going through the filter (col 1, lines 62-64).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Hagiwara et al with rectifying vanes arranged on an inner wall of the cylindrical flow guide as taught by Broaddus et al because it distributes uniformly cooling gas prior to flow through the filter.

References of Interest

15. Balk (4,820,142), Nguyen et al (6,444,151), Fletcher (3,834,847) and Valteris et al (4,631,018) are cited of interest to show the state of the art.

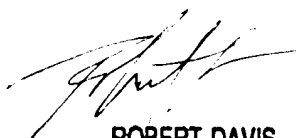
Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (703) 308-6295. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for non-after finals and (703) 872-9311 for after finals.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

J.S.D.
May 12, 2003


ROBERT DAVIS
PRIMARY EXAMINER
GROUP 1300

5/12/03